Main Findings on an Ann Arbor Sustainable Energy Utility

The proposed Ann Arbor Sustainable Energy Utility (SEU) can be financially viable for the city, generate cost savings for Ann Arborites, increase resilience, and reduce emissions.

The key variable determining the extent of the financial savings for Ann Arborites is the Financing Rate. The financing terms for the SEU are of critical importance. Higher interest rates translate to higher SEU rates, shrinking the cost savings that Ann Arborites can achieve. An interest rate above 6% would result in high SEU rates, making the residential offering more expensive than being served exclusively by DTE. Rates lower than that lead to savings under our baseline assumptions.

Furthermore, a minimum size SEU is required to offer competitive rates to subscribers. Program costs can significantly impact SEU rates when the SEU is small, but their impact decreases as the SEU grows. Our analysis shows that the City should target at least a 20 MW SEU for the initial stage, which could be achieved through a combination of residential and commercial customers.

Other Variables:

In addition to these two critical variables, there are other factors that influence the success of the SEU, including: service offerings, tax credits and fundraising, system sizing, and material costs. Some of the key variables analyzed and of importance to the proposed SEU include:

- The 30% Investment Tax Credit, which will reduce the required upfront capital needed to implement the SEU, lowering operating costs and leading to lower subscriber rates.
- Solar only rates from the SEU will be lower than DTE's existing rates under nearly all scenarios.
- Solar plus storage rates will, however, be higher than DTE's existing rates. However, solar + storage through the SEU can be cheaper than DTE's rates + purchasing and operating a generator. For residents interested in increasing resilience, lowering emissions, and/or reducing local air pollution, the SEU solar+storage option may be a better fit than pursuing a generator.
- System sizing is very important. DTE's distributed generation program follows an inflow-outflow mechanism. When solar is generating, it reduces grid consumption, but if the consumer does not need all the solar energy generated, the excess is sent out to the grid (outflow). The outflow rate is lower than the inflow rate and possibly the SEU cost meaning the SEU and its subscribers should ensure the right sizing of systems. Consequently, we recommend the City establish a process to review previous energy bills and recommend the best sizing and tariff for each subscriber. This process should be in place even under a PPA scenario, as a PPA provider may have an incentive to oversize.
- The SEU is agnostic to residential versus commercial customers. However, because of the sensitivity around adoption rates, we believe it would be strategic to ensure significant enrollment from commercial customers.
- Partnering with a third party and financing the SEU through a Power Purchase Agreement (PPA) will help alleviate some of the executional and funding concerns associated with launching the SEU while allowing the City to eventually own the assets and expand SEU offerings in the future once a historical revenue stream has been secured.